AMENDMENTS TO THE CLAIMS

(IN FORMAT COMPLIANT WITH THE REVISED 37 CFR 1.121)

Please add new claims 18-21.

1. (CURRENTLY AMENDED) A circuit comprising:

a memory element defining a semaphore allocatable to a resource; and

a controller configured to (i) present a granted status in response to a processor reading a first address while said semaphore has a free status, (ii) set said semaphore to a busy status in response to ~~presenting said granted status~~ said processor reading said first address while said semaphore has said free status, and (iii) present said busy status in response to said processor reading said first address while said semaphore has said busy status.

2. (ORIGINAL) The circuit according to claim 1, wherein said controller is further configured to set said semaphore to said free status in response to said processor writing to said first address.

3. (ORIGINAL) The circuit according to claim 1, wherein said controller is further configured to present said status of

said semaphore in response to said processor reading a second address.

4. (ORIGINAL) The circuit according to claim 3, wherein said controller is further configured to maintain said status of said semaphore in response to said processor writing to said second address.

5. (CURRENTLY AMENDED) ~~The~~ A circuit ~~according to claim 1, further~~ comprising:

a first memory element defining a first semaphore allocatable to a resource; and

a first controller configured to (i) present a granted status in response to a processor reading a first address while said first semaphore has a free status, (ii) set said first semaphore to a busy status in response to presenting said granted status and (iii) present said busy status in response to said processor reading said first address while said first semaphore has said busy status; and

a second memory element defining a second semaphore allocatable to said first semaphore~~; and~~

~~a second controller configured to (i) present said granted status in response to said processor reading a third address while said second semaphore has said free status, (ii) set~~

~~said second semaphore to said busy status in response to presenting said granted status, (iii) present said busy status in response to said processor reading said third address while said second semaphore has said busy status, and (iv) set said second semaphore to said free status in response to said processor writing to said third address~~.

6. (CURRENTLY AMENDED) The circuit according to claim 5, wherein said first controller is further configured to~~:~~ (i) slave said first semaphore to said second semaphore~~,~~ (ii) present said busy status in response to said processor reading said first address while said second semaphore has said busy status~~,~~ and (iii) maintain said busy status for said first semaphore in response to said processor writing to said first address while said second semaphore has said busy status.

7. (CURRENTLY AMENDED) The circuit according to claim 6, wherein said first controller is further configured to set said first semaphore to said free status in response to said processor writing to ~~said third~~ a second address.

8. (CURRENTLY AMENDED) The circuit according to claim 6, wherein said first controller is further configured to maintain

said busy status for said first semaphore in response to said processor writing to ~~said third~~ a second address.

9. (CURRENTLY AMENDED) A method of allocating a resource to a processor, comprising the steps of:

(A) defining a semaphore allocatable to said resource;

(B) presenting a granted status in response to said processor reading a first address while said semaphore has a free status;

(C) setting said semaphore to a busy status in response to ~~presenting said granted status~~ said processor reading said first address while said semaphore has said free status; and

(D) presenting said busy status in response to said processor reading said first address while said semaphore has said busy status.

10. (ORIGINAL) The method according to claim 9, further comprising the step of setting said semaphore to said free status in response to said processor writing to said first address.

11. (ORIGINAL) The method according to claim 9, further comprising the step of presenting said status of said semaphore in response to said processor reading a second address.

12. (ORIGINAL) The method according to claim 11, further comprising the step of maintaining said status of said semaphore in response to said processor writing to said second address.

13. (CURRENTLY AMENDED) ~~The~~ A method ~~according to claim 9, further~~ of allocating a resource to a processor, comprising the steps of:

(A) defining a first semaphore allocatable to said resource;

(B) presenting a granted status in response to said processor reading a first address while said first semaphore has a free status;

(C) setting said first semaphore to a busy status in response to presenting said granted status;

(D) presenting said busy status in response to said processor reading said first address while said first semaphore has said busy status; and

(E) defining a second semaphore allocatable to said first semaphore~~,~~

~~second presenting said granted status in response to said processor reading a third address while said second semaphore has said free status,~~

~~setting said second semaphore to said busy status in response to said second presenting of said granted status,~~.

~~presenting said busy status in response to said processor reading said third address while said second semaphore has said busy status; and~~

~~setting said second semaphore to said free status in response to writing to said third address~~.

14. (CURRENTLY AMENDED) The method according to claim 13, further comprising the steps of:

slaving said first semaphore to said second semaphore;

presenting said busy status in response to said processor reading said first address while said second semaphore has said busy status; and

maintaining said busy status for said first semaphore in response to said processor writing to said first address while said second semaphore has said busy status.

15. (CURRENTLY AMENDED) The method according to claim 14, further comprising the step of:

setting said first semaphore to said free status in response to said processor writing to ~~said third~~ a second address.

16. (CURRENTLY AMENDED) The method according to claim 14, further comprising the step of:

maintaining said busy status for said first semaphore in response to said processor writing to ~~said third~~ a second address.

17. (ORIGINAL) A circuit comprising:

means for defining a semaphore allocatable to a resource;

means for presenting a granted status in response to a processor reading a first address while said semaphore has a free status;

means for setting said semaphore to a busy status in response to presenting said granted status; and

means for presenting said busy status in response to said processor reading said first address while said semaphore has said busy status.

18. (NEW) The circuit according to claim 5, further comprising a second controller configured to (i) present said granted status in response to said processor reading a second address while said second semaphore has said free status, (ii) set said second semaphore to said busy status in response to presenting said granted status and (iii) present said busy status in response to said processor reading said second address while said second semaphore has said busy status.

19. (NEW) The circuit according to claim 18, wherein said second controller is further configured to set said second semaphore to said free status in response to said processor writing to said second address.

20. (NEW) The method according to claim 13, further comprising the steps of:

second presenting said granted status in response to said processor reading a second address while said second semaphore has said free status;

setting said second semaphore to said busy status in response to said second presenting of said granted status; and

presenting said busy status in response to said processor reading said second address while said second semaphore has said busy status.

21. (NEW) The method according to claim 20, further comprising the step of:

setting said second semaphore to said free status in response to writing to said second address.